

Let's Learn About Freshwater Mussels!

What Is A Freshwater Mussel?

While walking along a stream located in the Delaware Estuary, you might come across one of the most imperiled aquatic animals in North America - the Freshwater Mussel! Freshwater mussels are a type of bivalve - a type of mollusc that has two connected shells to protect itself. Even though freshwater mussels are NOT the yummy mussels we eat (we eat their saltwater relatives), they play very important ecological roles in our environment. Some of these aquatic critters can even live to be up to 100 years old!

How Do They Eat?

Freshwater mussels are **filter feeders**.

Like other bivalves, mussels filter water with their gills to eat **phytoplankton**.

Mussels help to remove **dirt, algae, and pollutants** from our waterways.

One mussel can filter up to **10 gallons of water per day**.



Juvenile mussels growing in Wilmington, DE

How Do They Reproduce?

1. Females fertilize their eggs with sperm from a male to form larva (a glochidium).

2. The glochidia develop in their mother's gills for weeks to months.

3. Females release their glochidia which attach to a fish host and hitch a ride for a few weeks.

4. When ready, the newly formed juvenile mussels drop off of the fish and begin their lives at the bottom of the stream.

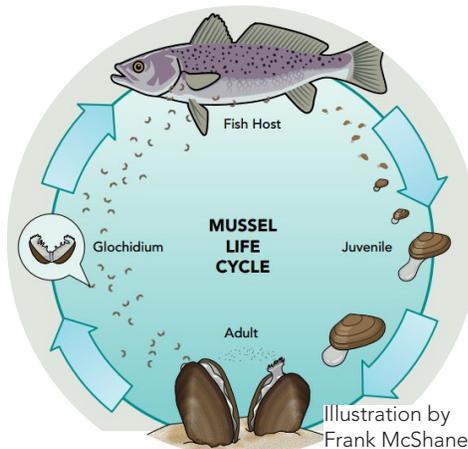


Illustration by Frank McShane

One mussel species can come in different colors!



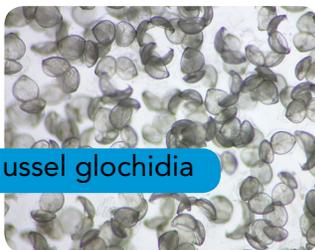
Fun Facts About Freshwater Mussels

There are over **300 species** of freshwater mussels native to North America - more species than anywhere else in the world!

Mussel larvae are called **glochidia** ("glo-kid-ee-ya")

One female mussel can produce more than **100,000 larvae!**

Freshwater Mussel Teachers Workshop



Mussel glochidia



Non-native Asian Clam (*Corbicula fluminea*)

Before the use of plastics, mussel shells were used to make **buttons** for clothing.

Look out for imposters! You might come across some **non-native species** of clams in your local rivers and streams.

Want to help look for freshwater mussels in the Delaware Estuary?

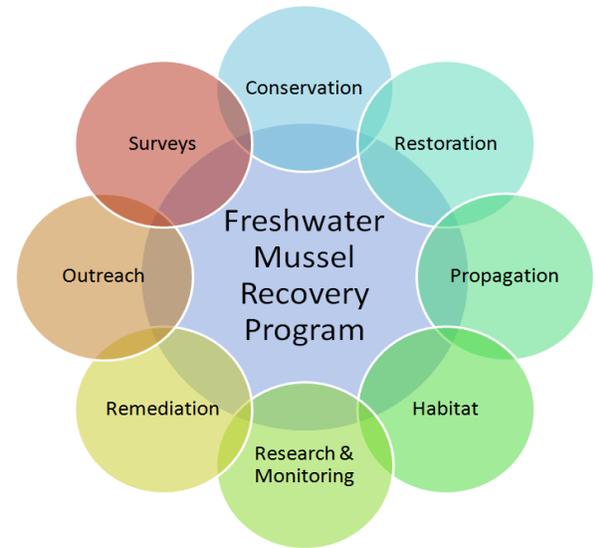
Go to PDE's Freshwater Mussel page to view our guidebook and learn more about our volunteer survey program:

<http://www.delawareestuary.org/science-and-research/freshwater-mussels/freshwater-mussels-volunteer-surveys/>

Why Do Freshwater Mussels Need Our Help?

Nearly **75%** of freshwater mussel species in North America have a conservation status of at least “concern” (with some species threatened or endangered). Today, you’re lucky to find any native mussels in the Delaware Estuary, since the abundance and distribution of all our native mussel species has dwindled. Causes for mussel declines include pollutants, dams, toxic spills, and overharvesting for bait.

To conserve and restore native mussel populations in the Delaware River Basin and vicinity, the Partnership for the Delaware Estuary created a **Freshwater Mussel Recovery Program (FMRP)** in 2007. This program includes surveys, scientific research, and reintroduction of mussels to historic waters in Delaware, New Jersey and Pennsylvania. A new focus on the urban corridor was launched in early 2018 with the formation of the **Aquatic Research & Restoration Center (ARRC)** by a coalition of seven cultural and environmental organizations from the Philadelphia region. This group will focus on restoring local aquatic ecosystems and developing programs for positive conservation impacts. One example project will be propagating and raising freshwater mussels to add to local streams and rivers to promote cleaner water and enhance habitat for other fish and wildlife.



Want to learn more about freshwater mussels?

Visit the Mussel Hatchery at the Fairmount Water Works!

Fairmount Water Works
640 Waterworks Drive
Philadelphia, PA 19130
(215) 685-0723



For more information, visit:
mightymussel.com



Partnership for the Delaware Estuary

The Partnership for the Delaware Estuary is a nonprofit organization established in 1996 to take a leadership role in protecting and enhancing the Delaware Estuary, where fresh water from the Delaware River mixes with salt water from the Atlantic Ocean. It is one of 28 Congressionally designated National Estuary Programs throughout the coastal United States working to improve the environmental health of the nation’s estuaries. Its staff works with partners in three states to increase awareness, understanding, and scientific knowledge about the Delaware Estuary, the region’s most important cultural, economic, and recreational resource.

Mission

The Partnership for the Delaware Estuary leads science-based and collaborative efforts to improve the tidal Delaware River and Bay, which spans Delaware, New Jersey, and Pennsylvania.

Acknowledgments

PDE is grateful to the dozens of partners that have helped us design and implement the regional FMRP. We are also grateful for the Philadelphia-based organizations that have recently joined with PDE to launch the ARRC, including the Philadelphia Water Department, Philadelphia Department of Parks & Recreation, Drexel University College of Arts & Sciences, Drexel University Academy of Natural Sciences, Partnership for the Delaware Estuary, Independence Seaport Museum, and Bartram’s Garden. We would like to thank everyone who has and will continue to contribute to this effort.